

MATH 156.01: Introduction to Mathematical Proof Workshop
SEMESTER: Spring 2019
INSTRUCTOR: Christopher Natoli

1 Details

Classroom: 204 Hunter West
Class time: Wednesdays 11:10AM–1:00PM
Textbook: *Book of Proof* by Richard Hammack
Email: chrisnatoli@gmail.com (*do not email me at any other address*)
Course website: <https://nato.li/teaching>

2 Tentative lecture schedule

1. Sets (§§1.1–1.8)
2. Symbolic logic (§§2.1–2.10)
3. Direct proof (§4)
4. Induction (§§10.1–10.2, §10.5)
5. Proofs by contrapositive and contradiction (§§5.1–5.2, §§6.1–6.2)
6. Proving equivalences (§7.1), proofs involving sets (§8), existence and uniqueness
7. *Exam 1*
8. Convergence and divergence of sequences
9. Limits of polynomial functions
10. Limits of rational functions
11. *Exam 2*
12. Relations (§11)
13. Functions (§12)
14. Cardinality of a set (§14)
15. *Final exam (during finals week)*

3 Workshops and homework

After lecture each week, I will hand out an assignment called a “workshop.” If we have time after the lecture, we will start the workshop together in class. The workshop is due the following lecture. You are permitted to work with classmates in class and after class. However, you must write up and submit your own solutions. *Write your solutions neatly, or else points will be deducted.* The lowest workshop grade will be dropped.

4 Grading

40% workshops, 20% for each exam.

5 Office hours

Office hours will be by appointment only, either the hour before class or the hour after class. If you’d like to meet for office hours, email me by midnight the night before class. Office hours are held in the math adjunct office, 924 Hunter East.